



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

# THE AMERICAN MATHEMATICAL MONTHLY

OFFICIAL JOURNAL OF

## THE MATHEMATICAL ASSOCIATION OF AMERICA

DEVOTED TO THE INTERESTS OF COLLEGIATE MATHEMATICS

EDITED BY

H. E. SLAUGHT

W. H. BUSSEY

R. D. CARMICHAEL

WITH THE COÖPERATION OF

R. C. ARCHIBALD

R. P. BAKER

W. C. BRENKE

A. COHEN

B. F. FINKEL

L. C. KARPINSKI

G. H. LING

HELEN A. MERRILL

U. G. MITCHELL

D. A. ROTHROCK

C. S. SLICHTER

D. E. SMITH

PUBLISHED BY THE ASSOCIATION

THE AMERICAN MATHEMATICAL MONTHLY, FOUNDED IN 1894 BY BENJAMIN F. FINKEL, WAS  
PUBLISHED BY HIM UNTIL 1912. FROM 1912 TO 1916 IT WAS OWNED AND PUBLISHED  
BY REPRESENTATIVES OF FOURTEEN UNIVERSITIES AND COLLEGES  
IN THE MIDDLE WEST

---

ISSUED MONTHLY EXCEPT IN JULY AND AUGUST

LANCASTER, PA., AND CHICAGO

Entered at the Post Office at Lancaster, Pa., as Second Class Matter

## CONTENTS

The Presentation of the Notion Function. By JOSEPH A. NYBERG.....	309
Directed Angles and Inversion, with a proof of Schoute's Theorem. By ROGER A. JOHNSON .....	313
A Simple Relation between Elementary Number Theory and Elementary Projective Geometry. By AUBREY J. KEMPNER.....	317
Concerning Preferential Voting. By L. L. DINES.....	321
BOOK REVIEW. By LESTER S. HILL .....	325
PROBLEMS AND SOLUTIONS .....	327
QUESTIONS AND DISCUSSIONS. Replies by S. A. COREY, OSCAR SCHMIEDEL. Discussions: I, on a Curve with Unusual Properties, J. B. REYNOLDS ; II, on a Demonstration of an old Theorem by W. E. HEAL ; III, on Huntington's "Continuum and other Types of Serial Order," by LESTER S. HILL.....	341
NOTES AND NEWS .....	349

---

EDITORIAL CORRESPONDENCE should be addressed to the MANAGING EDITOR, H. E. SLAUGHT,  
5548 Kenwood Avenue, Chicago, Ill.

BUSINESS CORRESPONDENCE should be addressed to the SECRETARY-TREASURER of the  
ASSOCIATION, W. D. CAIRNS, 27 King Street, Oberlin, Ohio.

---

*A Revision and Abridgment of the authors' "Course in Mathematics for Students  
of Engineering and Applied Science."*

# Analytic Geometry and Calculus

By Frederick S. Woods and Frederick H. Bailey

Professors of Mathematics, Massachusetts Institute of Technology

**H**ERE in one volume is work which may be completely covered by an average college class in two years. After the early lessons, it does not teach calculus and analytic geometry as separate subjects, but calls for the processes of either as needed. The range of practical applications has not been diminished, and methods of approximation, including the determination of empirical equations, the use of Taylor's series in calculation, and approximate integration have been added. The problems number two thousand . . . . . **\$3.00**

**GINN AND COMPANY, Publishers**

**BOSTON  
ATLANTA**

**NEW YORK  
DALLAS**

**CHICAGO  
COLUMBUS**

**LONDON  
SAN FRANCISCO**